877

877 FREEARM, LIGHTWEIGHT, SUPER-AUTOMATIC WITH BUILT-IN PRACTICAL STITCHES AND STRETCH STITCHES

INSTRUCTION MANUAL

This booklet has been written for you, to help you use and enjoy fully your zigzag sewing machine.

Before you start to use this machine, please take a few minutes to study this booklet. You will find it will be time well spent in understanding your machine.

If you have any questions regarding the use of your sewing machine please do not hesitate to contact your supplier or ourselves.

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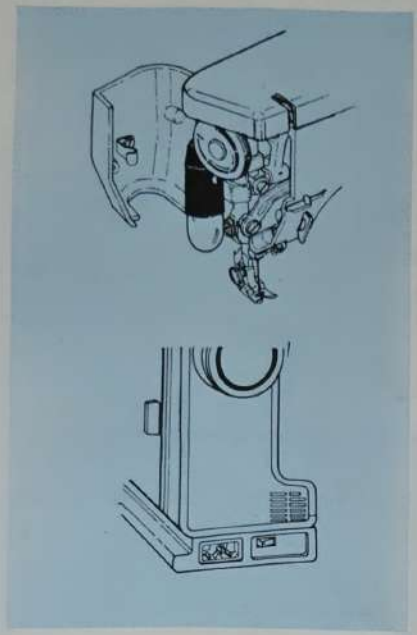
Identification

Sewing light

The sewing light is placed inside the face cover plate as shown, and illuminates the sewing area only. It may be turned on or off by pushing light switch, which is located on the right side of machine column.

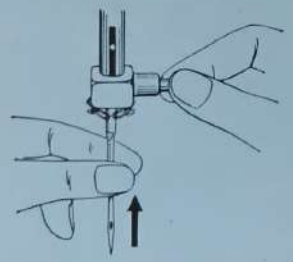
"DISCONNECT FROM MAINS SUPPLY BEFORE CHANGING BULB".

To change bulb, open the face cover plate by swinging it towards left, twist old bulb away from you and remove. Then insert new bulb.



Placement of needle

Raise needle bar to its highest position by turning handwheel toward you. Loosen needle clamp screw. Hold needle so that the flat side is away from you, slip blunt end of needle as far as it will go into needle clamp. Tighten clamp screw.



Flat side away from you

Connecting machine

IMPORTANT.

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral.
Brown: Live.

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

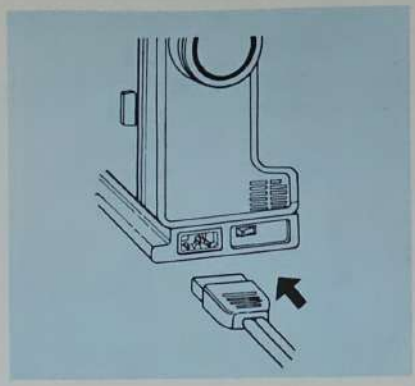
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Fit a 3 amp fuse when using a 13 amp (BS 1363) fused plug. If any other type of plug is used protect with a 5 amp fuse either in the plug or adaptor or at the distribution bourd.

If in doubt consult a competent electrician before use.

Push foot control plug into the connector socket at the right hand side of machine column. See illustration.



Needle and thread table

Use System 705 needles. The size of the needle should conform to the size of the thread and both should be suitable to the material. The same size thread should be used in the bobbin as on the upper part of the machine for ordinary sewing.

Never use a bent needle nor one with a blunt point.

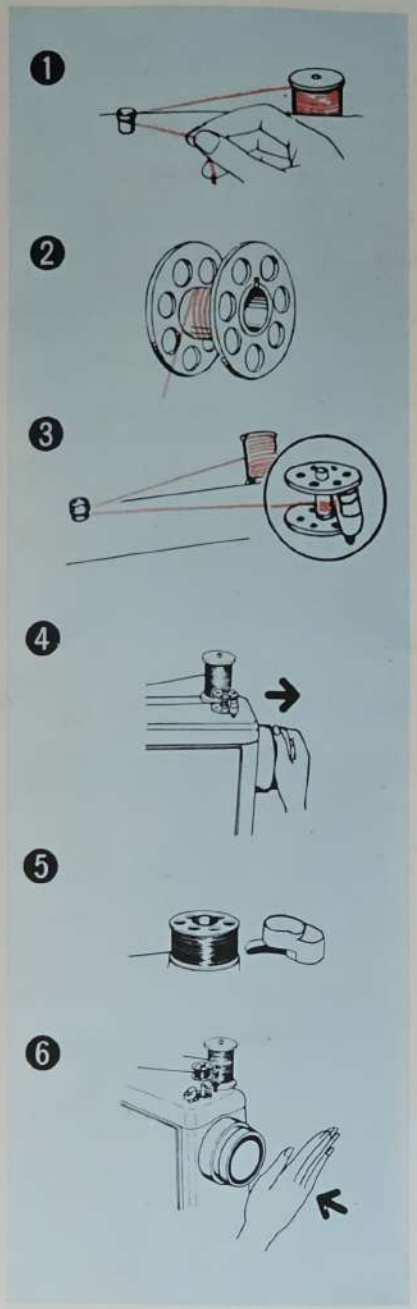
For successful sewing of stretch fabrics use the stretch stitch foot with gold shank and stretch stitch needles with blue shank.

Thread Size	Needle Size		Fabric
	Continental	American	
Cotton 60 - 100 Synthetic Machine embroidery	Blue shank needle		All stretch fabrics.
Cotton Synthetic Silk A Machine embroidery	70 (7) or 80 (8)	11 or 12	Sheer cottons, silk synthetics, fine laces, batiste, dimity.
Cotton 60 - 80 Mercerized 50 - 60 Synthetic	80 (8) or 90 (9)	12 or 14	Medium weight cottons, medium weight synthetics, poplin, seersucker, gingham, velvet, light weight woolens, linen.
Cotton 30 - 60 Mercerized heavy duty	100 (10)	16	Heavy weight cottons, medium to heavy weight woollens, denim.

(Note: New machines are fitted with American needle sizes.)

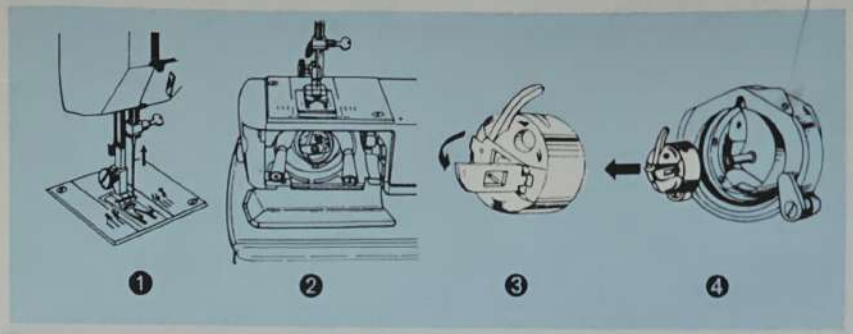
Winding the bobbin

1. Place thread on spool post. Draw thread as shown.
2. Wind thread around bobbin a few times.
3. Place bobbin onto bobbin winder shaft. Push bobbin winder latch until it clicks.
4. Release clutch by pulling hand wheel as shown in Fig. 4. Start machine.
5. When bobbin is full, winding mechanism stops.
6. Push in hand wheel to return to stitching position. Remove bobbin.



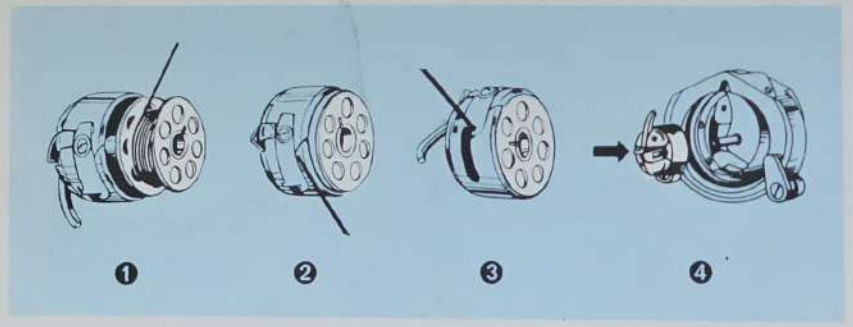
Removing bobbin case from shuttle

1. **Raise needle to its highest position.**
2. **Open shuttle cover.**
3. **Pull out latch of bobbin case.**
4. **Pull bobbin case straight out.**

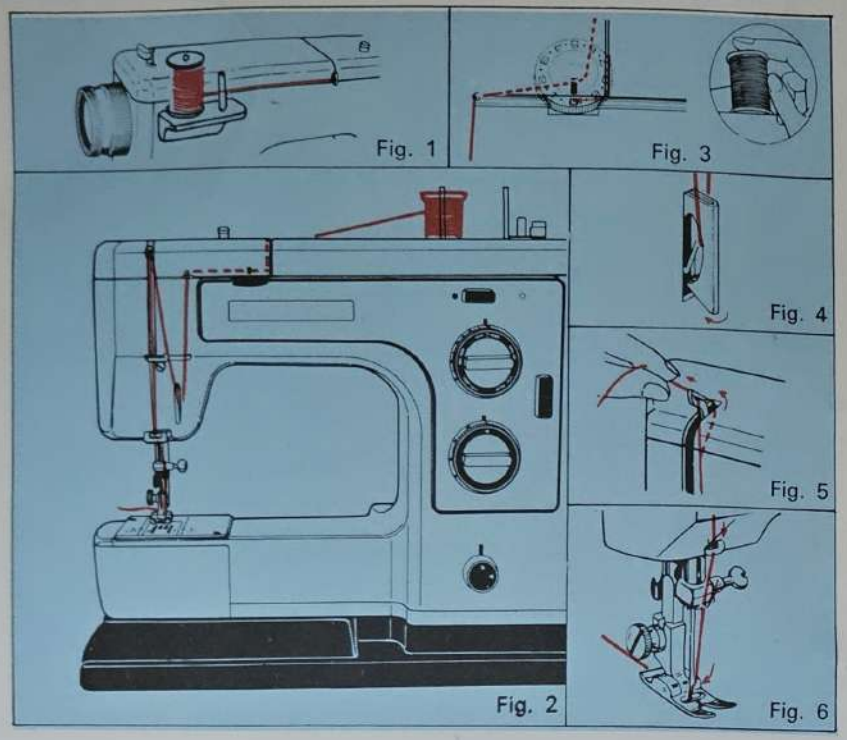


Inserting bobbin into bobbin case - case into shuttle

1. Guide bobbin onto center pin of bobbin case.
2. Pull thread through slot.
3. Pull thread under tension spring.
4. Holding latch, position case into shuttle, release latch.



Threading upper machine



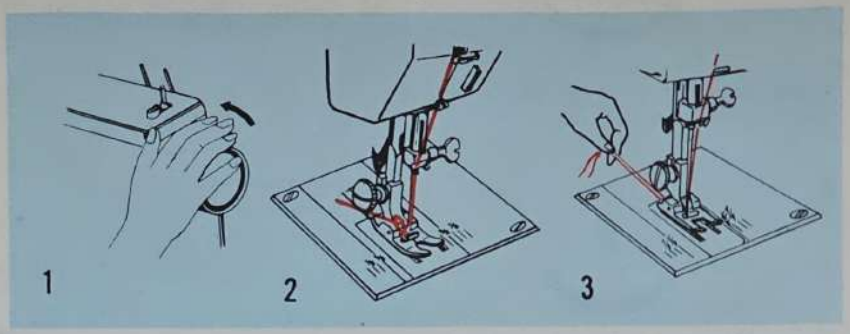
Place thread on spool pin as shown with thread coming from back of the spool. Draw thread through rear thread guide (See Fig. 1), into top threading path and then through front thread guide, holding the spool stationary with right hand to always hold thread taut to properly thread tension (See Fig. 3).

Draw thread down to thread tension spring to hook thread into the spring (See Fig. 4,) then up through thread guide to hook thread into take-up lever as shown (Fig. 5).

Continue to thread down through guides as shown in Fig. 6. Needle must always be threaded from front to back as shown in Fig. 6.

Picking up bobbin thread

1. Raise presser foot lever. Hold needle thread loosely in left hand and rotate handwheel toward you one complete turn.
2. Bring bobbin thread up by pulling upper thread.
3. Place threads back under presser foot.



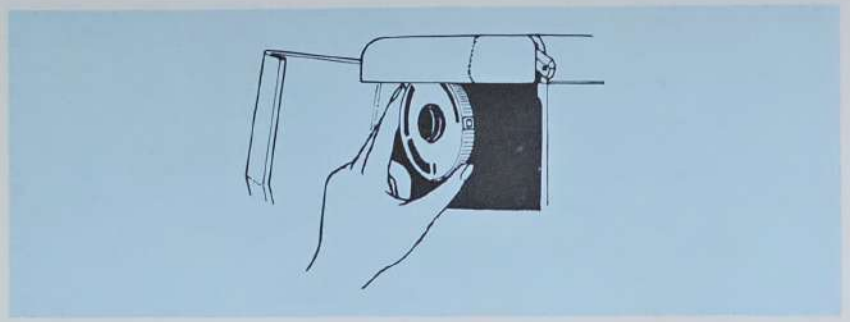
Pressure adjustment

"DISCONNECT FROM MAINS SUPPLY BEFORE ADJUSTING"

The pressure on the presser foot is regulated by turning the dial of this regulator which is situated in face cover plate (See illustration).
To increase the pressure, turn the dial clockwise, until a suitable pressure is obtained.
Make certain presser foot lever is in the up position during adjustment.

Insufficient pressure may cause poor feeding of the fabric, skipped stitches, or difficulty in guiding the fabric.

When sewing multiple thickness or heavy fabric, reduce the pressure. Increase pressure when sewing lighter weight fabrics. If feed dog or presser foot marks appear on the fabric, reduce the pressure.



Adjusting top tensions

A perfect stitch will have threads locked between the two layers of fabric with no loops on top or bottom.

When upper thread is too tight, decrease tension.

When upper thread is too loose, increase tension.

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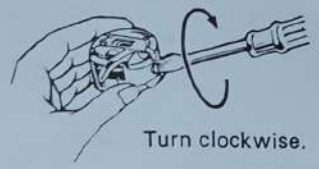
Adjusting bobbin tensions

When stitching is unsatisfactory in figures 2 and 3 above, adjust the upper thread tension. LOWER THREAD TENSION REQUIRES ADJUSTMENT LESS FREQUENTLY THAN THE UPPER THREAD TENSION.

When stitch is satisfactory, as in Fig. 1 and seam is badly puckered, the cause may be tight tensions and both upper and lower may be adjusted.

When adjusting the tension on the bobbin case, make slight adjustments with a screwdriver.

INCREASE TENSION



Turn clockwise.

DECREASE TENSION

Turn counter clockwise.

Feed dog control

The feed dog control knob is situated on the bottom of machine column. When knob is turned counter clockwise until it clicks, feed dog drops and does not pull material (See Fig. 1).
This allows the operator freedom of movement of material, as for darning.
For regular sewing, turn knob clockwise (See Fig. 2).

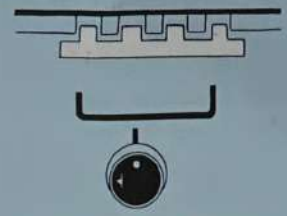


Fig. 1 (FEED DOG DOWN)

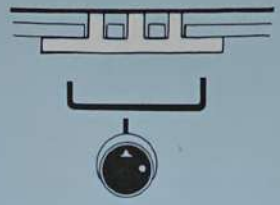


Fig. 2 (FEED DOG UP)

Zigzag and straight stitching plate

Needle plate insert

You are provided with two needle plate inserts. The one with the wide oval hole is to be used for all zigzag stitching. The one with the small round hole is for regular straight stitching or straight stretch stitch sewing.

Changing needle plate inserts

1. Raise needle to its highest position and raise presser foot.
2. Swing shuttle cover open.
3. Push a spring under the plate as shown to release the needle plate insert.
4. Remove needle plate insert by placing thumb under edge of plate.
5. Replace the needle plate insert positioning as shown in Fig. 3.
6. Push needle plate insert down to lock into place. Reposition the shuttle cover.

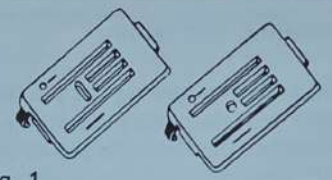


Fig. 1

Fig. 2

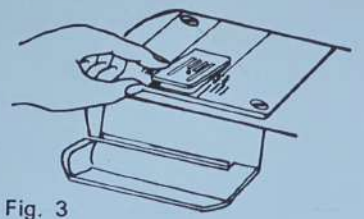
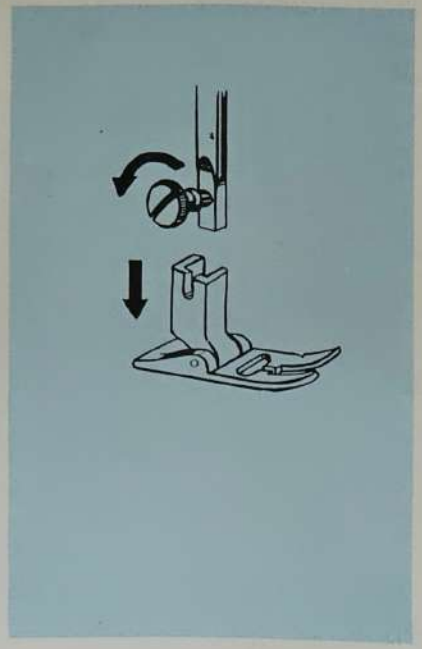


Fig. 3

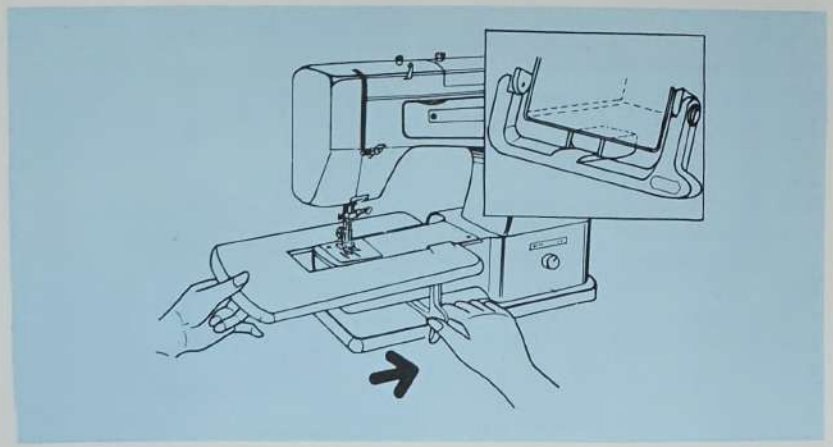
Changing the presser foot

The various attachment feet available for certain kinds of work are to be fastened to the presser bar.
To attach the foot, raise the presser bar to its highest position by raising the presser foot lever.
Drop feed dog, loosen the presser foot thumb screw, choose the proper foot and insert from the front.
Tighten the screw using the large screw driver and make sure that the foot is secure.



Installing flat table

For all normal sewing use the flat table provided with the machine.
To install the flat table unfold the "U" shaped locking bar, slide the table along the freearm until it is fully home. Push the locking bar to the right to lock the flat table into position. Lower the two supporting legs.



Inserting and removing the material

For all kinds of sewing, consult chart page 5.

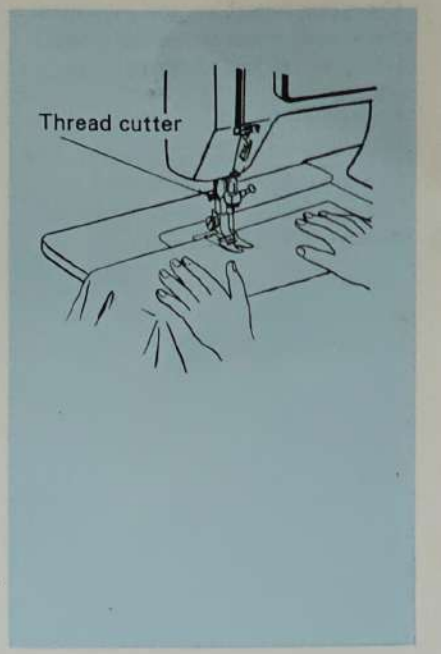
Before placing the material on the machine see that:

The presser foot and needle clamp screws are both tight.
The sizes of the needle and thread suit the kind of work to be done.
The needle is at its highest position.
The ends of threads have been drawn about 4 inches to the rear of the machine.
The feed dogs are up.

Place material under the presser foot, insert the needle into the material by turning the handwheel toward you, lower presser foot and start sewing. Experiment by sewing of the fabric to be used to determine tension adjustment and correct stitch settings.

To remove the work, first turn the handwheel toward you until the needle is at its highest position, then raise the presser foot, draw materials to the rear and cut off excess thread with the thread cutter located on the presser bar. To avoid sewing off the end of the material, back tack each seam. See page 26.

IMPORTANT: Always turn the handwheel toward you! When the machine is not being used, place a piece of material over the feed dog and lower the presser foot. Always have fabric under the presser foot when operating the machine. Operating threaded machine without fabric will cause it to jam by forcing lint into the shuttle. See page 36.



Setting stitch length

The stitch length control regulates the length of the stitch you select. THE HIGHER THE NUMBER - THE LONGER THE STITCH.
Turn stitch length control to the desired point between 0 and 4. The 4 setting is the longest stitch.
The size of the stitch selected will depend on the fabric sewn.

The marking — on this control is the setting used for the shortest stitches such as in Satin Stitching.

Reverse stitch control

It is best to begin and end seams with a few stitches taken in reverse. This is called back tacking. Back tacking fastens the ends of the seams firmly and prevents ravelling.

When reverse stitching is needed, turn the control clockwise and hold it there during sewing. The fabric will immediately start feeding backwards and seam will be fastened.

Buttonhole control

This control is used in making buttonholes. Detailed instructions are given in the pages **28 & 29**.
Be sure this control should be set at • for any other sewing except buttonholes.

Setting stitch width

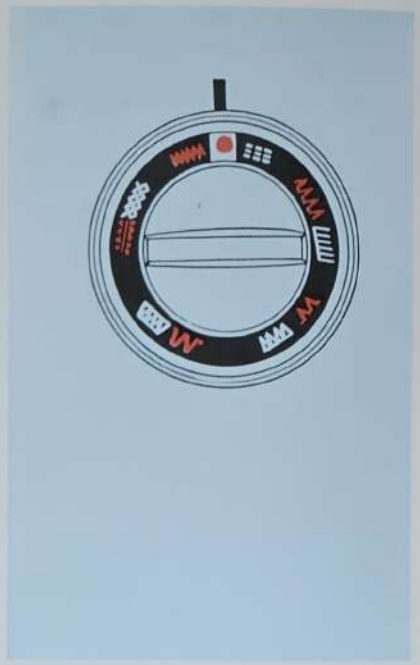
Turn the stitch width control to the desired setting between 0 and 4 on the control.
Zigzag stitch width increases from 1 to 4.
Straight stitching is done with stitch width control on 0 setting.

Special stitch modifier

This control gives you the means of varying the stitches on the Special Stitch Dial. When the pointer is turned to the Red Dot, the machine sews forward only. When the pointer is turned to the White Dot, the forward designs are varied by the machine sewing in a forward and reverse manner. Carefully read directions given in the next few pages in order to accomplish the various stitches correctly.

Special stitch selector

All stitches printed in red on the dial must be sewn with the Special Stitch Modifier set at the Red Dot. To make the stitches printed in white on this dial, the Special Stitch Modifier must be set at the White Dot.



Special stitch selector

Straight and zigzag stitch

You can straight stitch and zigzag stitch by setting as follows:

Special Stitch Selector:

Stitch Length Control:	any number 0.5 to 4
Stitch Width Control:	any number 0 to 4
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Stretch Stitch

You can stretch stitch by setting as follows:

Special Stitch Selector:

Stitch Length Control:	4
Stitch Width Control:	0 to 4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

Mending Stitch

You can achieve fine mending stitches by setting as follows:

Special Stitch Selector:

Stitch Length Control:	near 0.5
Stitch Width Control:	4
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Smocking Stretch

You can make overcast stretch stitching by setting as follows:

Special Stitch Selector:

Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

Special stitch selector

Fancy Hem

You can make fancy hemming by setting as follows:

Special Stitch Selector:

Stitch Length Control:	0.5 to 1
Stitch Width Control:	2 to 4
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Elastic Stretch

You can make elastic stretch stitching by setting as follows:

Special Stitch Selector:

Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

Blind Hem

You can make blind hemming by setting as follows:

Special Stitch Selector:

Stitch Length Control:	1.5 to 2
Stitch Width Control:	1.5 to 2
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Overcast Stretch

You can make smocking stretch stitching by setting as follows:

Special Stitch Selector:

Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

Special stitch selector

Shell Hem

You can make shell hemming by setting as follows:

Special Stitch Selector:

Stitch Length Control:	1.5 to 2
Stitch Width Control:	1.5 to 2
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Serging or pine leaf stretch

You can make serging or pine leaf stretch stitching by setting as follows:

Special Stitch Selector:

Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

Fancy hemming -

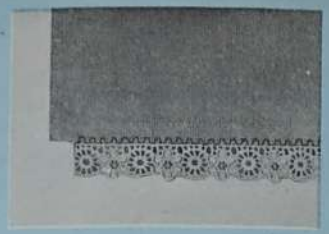
This attractive stitch is used for attaching lace, combining two pieces of fabric, decorating pocket cover and so on as shown. As you become familiar with your machine, you will be able to find out new uses of this stitch.

Setting:

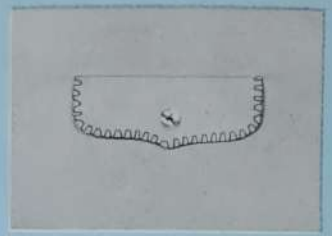
Special Stitch Selector:	
Stitch Length Control:	0.5 to 1
Stitch Width Control:	2 to 4
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Combining fabrics

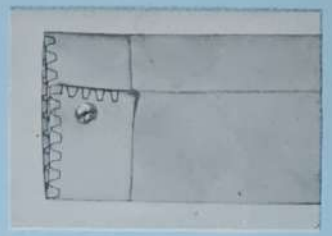
Attaching lace



Design on pocket



Design on cuff

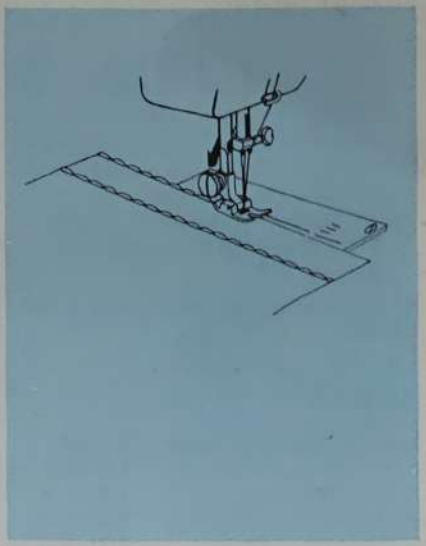


Shell hemming

This attractive stitch is used for decorating dresses and blouses.
It is recommendable that this shell stitching must be used for soft fabric as silk, batiste.
As you become familiar with your machine, you will be able to find out new uses of this stitch.

Setting:

Special Stitch Selector:	
Stitch Length Control:	1.5 to 2
Stitch Width Control:	1.5 to 2
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

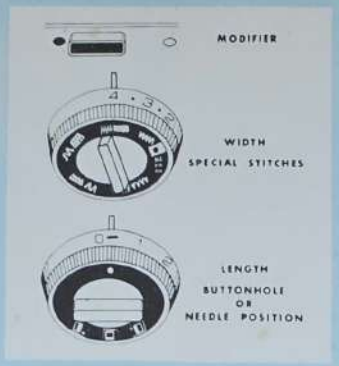


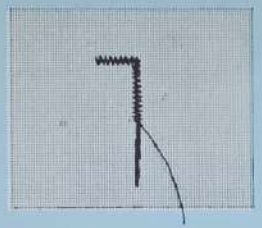
Straight or three - cornered tear

Position tear under needle and stitch along the straight tear catching sides of material. When mending a three cornered tear, stitch from each end to center.

Setting:

Special Stitch Selector:	
Stitch Length Control:	RED ZONE
Stitch Width Control:	4
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT





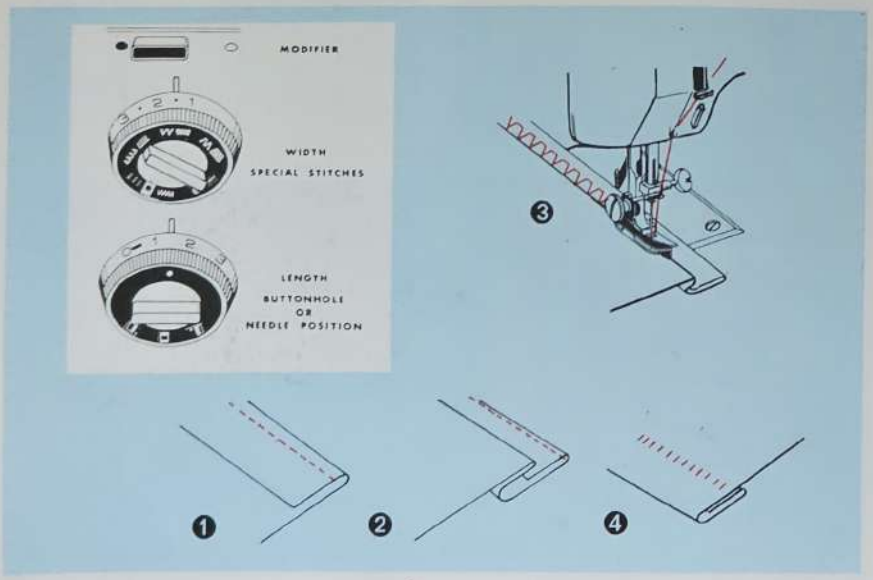
Blind stitching

Follow the instructions below.

1. Fold material and baste.
2. Make second fold overlapping basting.
3. Insert the blind stitch guide into the right side of the presser foot thumb screw as shown.
   Set your machine as shown, so that one zigzag stitch catches second fold.
4. Unfold, remove basting and press hem.

Setting:

Special Stitch Selector:	VV WW
Stitch Length Control:	1.5 to 2
Stitch Width Control:	1.5 to 2
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT



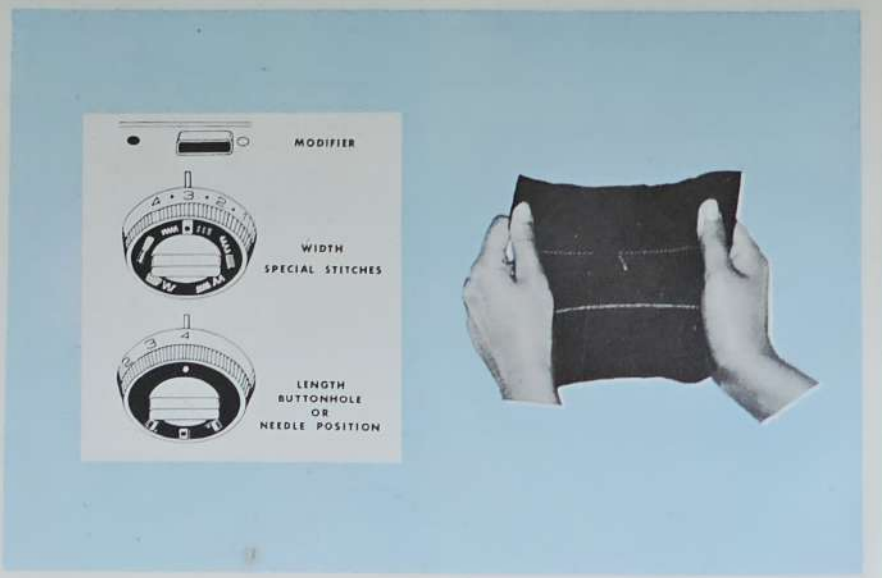
Stretch stitching

This special stretch stitch is ideally suitable for knitted fabrics and other stretch materials. Sew as you do a regular straight stitch seam.
The machine will make triple lock stitches - forwards, backwards and forwards - producing a very strong stitch. Regular stitching is broken when fabric is stretched as shown in the upper stitching. However, this special stretch stitch stretches with the fabric without breaking thread. (See the lower stitching in the illustration.)
This is also a good stitch to use on curved seams that will receive a great deal of strain when worn, such as in children's shorts and slacks as well as adult sport clothes.

Use stretch stitch foot for all kinds of sewing on stretch fabrics.

Setting:

Special Stitch Selector:	WWW
Stitch Length Control:	4
Stitch Width Control:	0 to 4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT

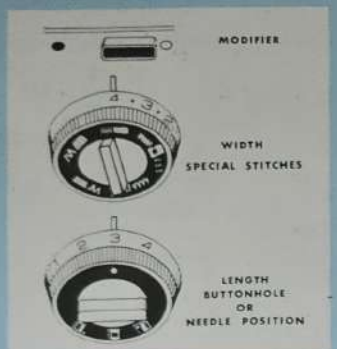


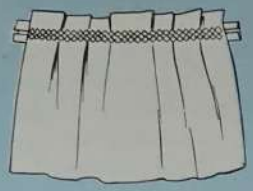
Smocking stretch stitching

With a narrow strip of fabric directly under the line of gathering, stitch over the gathers. The design will be a series of small diamonds. Make the design more interesting by using two different colors of thread.
When smocking a garment, the stitching should be done before the piece is sewn into the garment.

Setting:

Special Stitch Selector:	
Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT



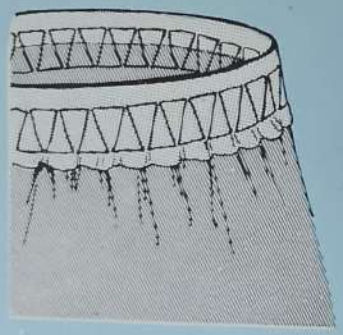


Elastic stretch stitching

This is a good stitch to use in making or repairing lingerie. The stitch is decorative as well as useful. It has a lot of stretch to it and is strong as well. Simply stitch the elastic into place around the waist of the garment, making sure that the elastic is evenly distributed. To do this mark the correct length piece into quarters and match these markings with center front and back of garment as well as side seams.

Setting:

Special Stitch Selector:	
Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT



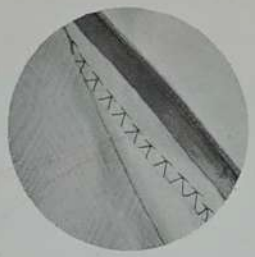
Overcast stretch stitching

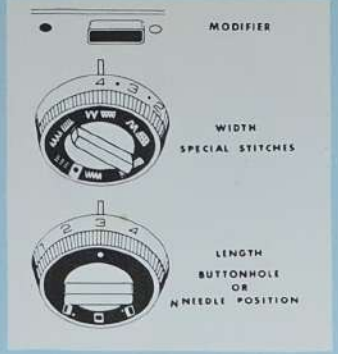
The raw edge of each seam allowance can be overcast to prevent further ravelling.

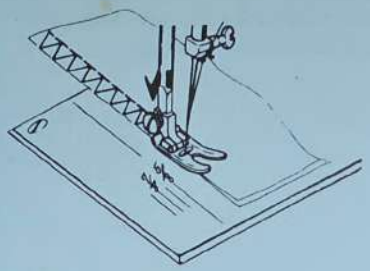
This is the same type of stitch used by the garment industry in making sportwear. The seam is formed and finished in one operation. It must be used when you are making swimwear, ski pants and other garments that require stretch.

Setting:

Special Stitch Selector:	
Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT





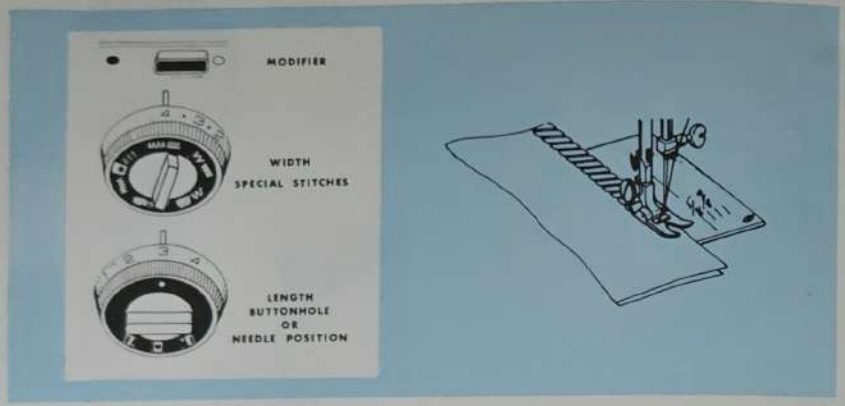


Serging or pine leaf stretch stitching

The serging or pine leaf stretch stitch is equally useful with woven and knitted fabrics. This stitch can be used in making elastic swimwear, as well as overcasting a neat edge on the seams.

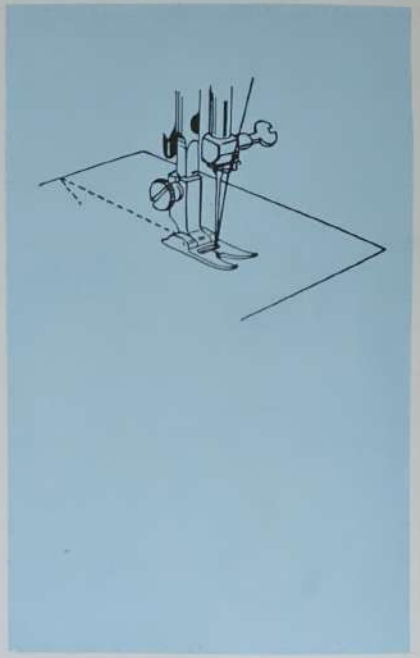
Setting:

Special Stitch Selector:	ΛΛΛ///
Stitch Length Control:	near 3
Stitch Width Control:	4
Special Stitch Modifier:	WHITE DOT
Buttonhole Control:	RED DOT



Fastening a seam

Be sure both threads are drawn back under the presser foot. Lower needle into fabric about ½ inch from beginning of seam. Turn reverse control clockwise for reverse stitching.
Stitch in reverse until needle reaches beginning of seam.
Release reverse control for forward stitching and complete seam.
When you reach the end, turn reverse control clockwise and sew back over ½ inch of completed seam.



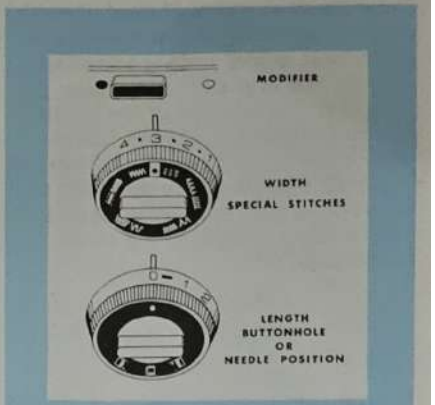
Darning

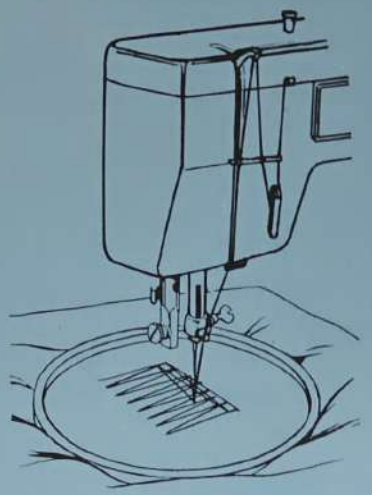
Drop feed dog.
Remove presser foot. Stretch fabric between embroidery hoops and place under needle. Draw the bobbin thread up through fabric by holding the upper thread and taking one stitch at the spot where you wish to begin darning. Lower presser bar. Start sewing at a medium machine speed. Move the fabric back and forth with a steady rhythm to cover the darning area. Then turn the fabric and sew another layer of stitching at right angles to the first. Move the fabric fast for long stitches, slowly for short stitches.

If you wish to darn without using embroidery hoop, leave the presser foot attached, move feed dog control to the left, and turn the presser foot regulator dial to 0 - Darn, thereby removing pressure on the presser foot. Then proceed as above, stretching fabric tightly between hands.

Setting:

Special Stitch Selector:	WWW▣≡≡≡
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT





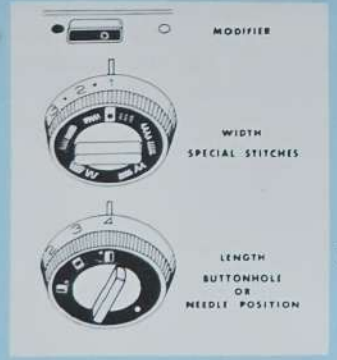
Buttonhole making

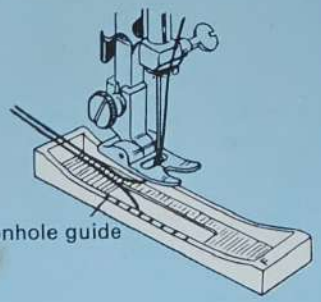
Carefully mark the buttonhole length on your garment. Mount one of the buttonhole guides onto the presser foot so that rear edge of presser foot is at the rear end of the guide as shown below. Place the fabric with the buttonhole marked under the buttonhole guide. Slide the guide foot forward so that the needle pierces the fabric at the beginning of the buttonhole.

One of the buttonhole guides must be fixed to obtain perfect buttonholes.

Setting:

Special Stitch Selector:
Stitch Length Control: 4
Stitch Width Control: 1 to 1.5
Special Stitch Modifier: RED DOT
Buttonhole Control: See page 29.





Buttonhole guide

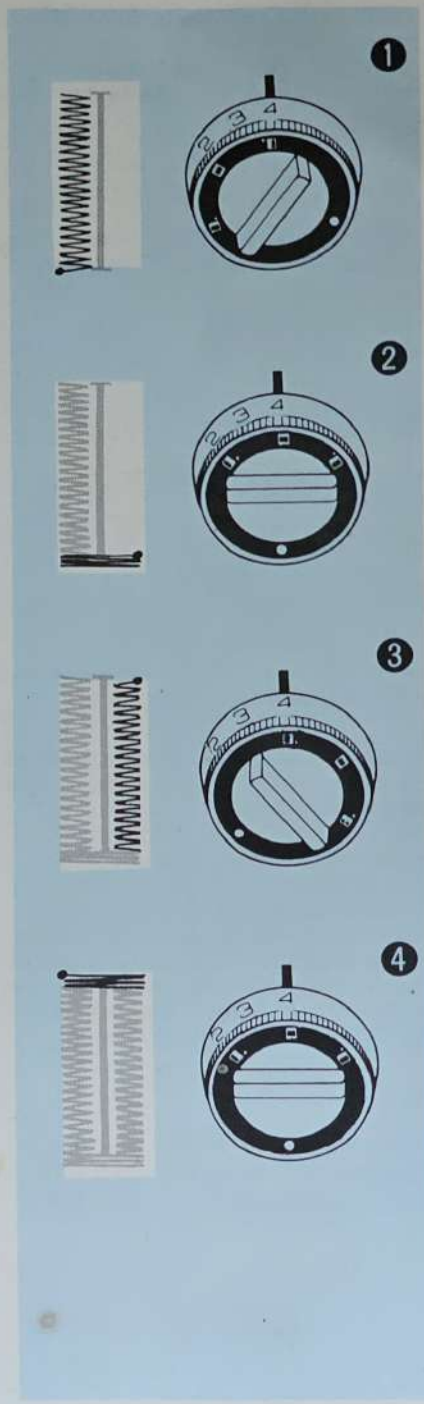
Buttonhole making

Always make a practice buttonhole on a piece of the fabric to be used in the garment. Try the buttonhole with the button you will use.

1. Set buttonhole control to
   Stitch forward until you reach the front marking of your buttonhole. Stop sewing at the left stitch and then raise needle at its highest position by turning handwheel toward you manually.
2. Set buttonhole control to
   and bartack several times. Stop sewing at the right stitch. Raise needle at its highest position as in step 1.
3. Set buttonhole control at
   and continue sewing until needle reaches beginning of your buttonhole. Stop sewing at the right stitch and then raise needle as in steps 1 & 2.
4. Set buttonhole control to
   again and bartack to complete buttonhole.
5. Reset buttonhole control to the red dot for normal sewing.

To make firm well stitched buttonholes in heavier fabrics, repeat only steps 1 and 3.

You have been provided with an assortment of buttonhole guides in making buttonholes. They are $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{13}{16}$" and $1\frac{1}{16}$" and are marked accordingly. By using these guides, you will accurately make identical bar tacked buttonholes every time.



Applique

Baste cutout applique to fabric. Set stitch width 2 to 4. Set stitch length at ½ to 1. Zigzag stitch around applique completely covering the raw edge.

Setting:

Special Stitch Selector:	
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

Writing and monogramming

Drop feed dogs. Draw initials or words to be sewn on fabric and fit fabric into embroidery hoops. Writing is done with either zigzag or straight stitching. Remove presser foot. Set stitch width for straight or zigzag stitches as desired. Slip hoop and fabric under the needle, lower presser bar and take one stitch to raise bobbin thread through fabric. Using a medium speed, stitch along marked outline, guiding fabric carefully by hands.

Setting:

Special Stitch Selector:	
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT

The double needle

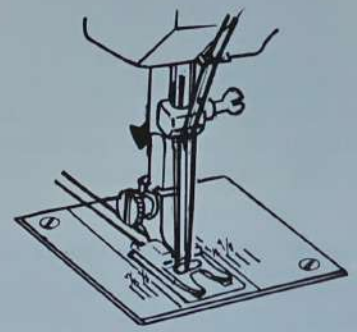
The machine is set exactly the same as when using the single needle with one important exception. The Stitch Width Control must never be set beyond 2. The double needle will be broken if a wider stitch is used.

Placement of needle:

Raise the needle bar to its highest position and loosen the needle screw. Hold the double needle with the flat side away from you. Slip the needle into the needle bar as far as it will go. Tighten the screw.

Threading the double needle:

Place a spool of thread on each spool pin. Draw both threads through upper threading path.
Continue threading as you do for single needle sewing.
Draw one thread through each side of the double thread guides and through each needle from front to back.
Turn hand wheel manually once to be sure needle will clear the presser foot. Pick up bobbin thread as for single needle sewing. Pull threads to back of foot and start to sew.

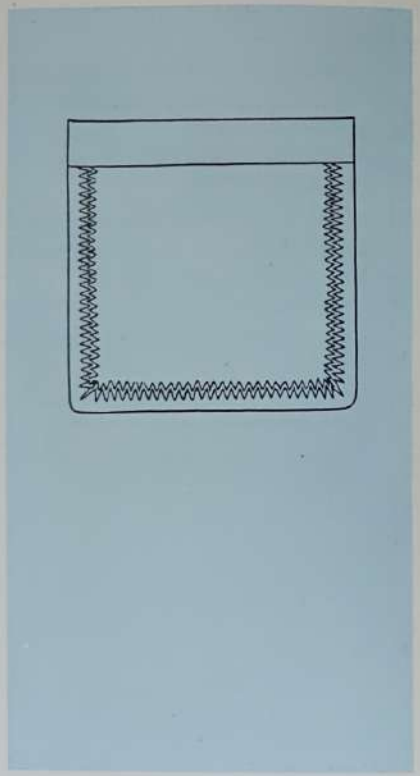


Using the double needle

You may find that you would like to use the double needle for designs. Whenever you use the double needle even for straight stitching, remember the following things:

* Use a zigzag presser foot and needle plate slot.
* Always make a practice design on a scrap of the fabric you plan to use.
* Start with a full bobbin and plenty of thread on the spool to avoid running out of thread in the middle of your design.

For your reference of uses of the designs, see the illustration. You will soon be combining designs and creating new uses when you become familiar with your machine.



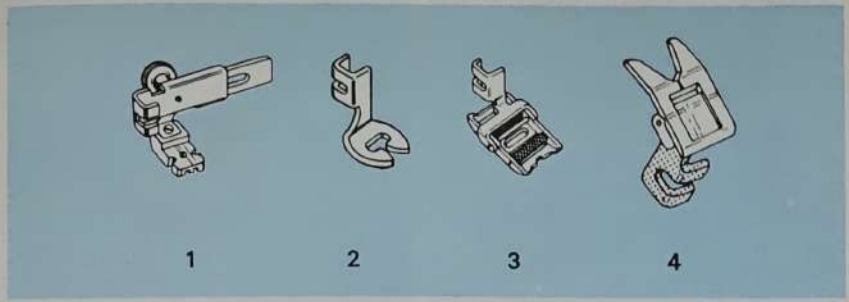
Turning a corner with double needle:

To turn a square corner with a double needle, stop stitching with the longer needle tip just piercing the fabric. Raise the presser foot, shift fabric half the turn, lower presser foot and take one stitch. Raise the presser foot again, complete the turn, and begin stitching in the new direction.

Attachments supplied with your machine

1. Zipper foot (P. #33818)
2. Button sewing foot (P. #614)
3. Roller foot (P. #28203)
4. Stretch stitch foot (P. #34482)
   Refer to page 23.

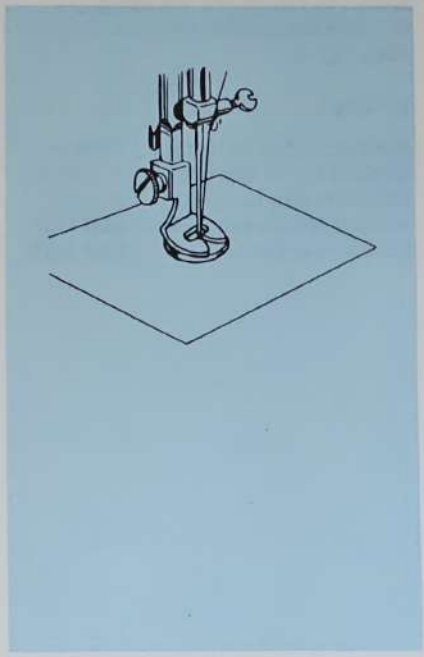
Very detailed instructions in the use of these attachments are given in following few pages.



Sewing on buttons

Use button sewing foot.

1. Drop feed dogs. Align two holes of button with slot of presser foot and lower foot to hold the button securely.
2. Turn hand wheel manually until needle point is just above button.
3. Adjust stitch width control so needle will enter one hole of the button.
4. Turn hand wheel again by hand so needle enters second hole. Readjust stitch width if necessary. Stitch a number of times.
5. Finish sewing with an extra two inches of thread remaining. Draw these threads to reverse side of garment and tie.



Zipper sewing

This foot is used to insert a zipper or to cover cording. Attach the Zipper Foot.

Regular zipper:

This foot is reversible so you can stitch to the right or to the left of a zipper or a cord. To sew on the left place the foot to the left of the needle so that the needle passes through the opening on the right side of the foot. (See Fig. 1).
To sew on the right, adjust the foot so that it is to the right of the needle with the needle passing through the opening on the left side of the foot.

Concealed zipper:

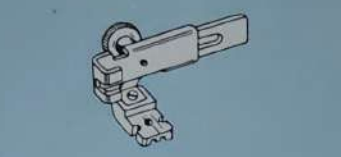
To sew on the left of the zipper, use the right groove on bottom of foot. (See Fig. 2). To sew on the right of the zipper, use the left groove on bottom of foot.

Cording:

To make cording for slipcovers, etc., cover the cord with a strip of bias from the fabric you are using. Enclose the cord in the bias strip. (See Fig. 3).

Setting:

Special Stitch Selector:	wwm▣≡≡
Stitch Length Control:	1.5 to 2
Stitch Width Control:	0
Special Stitch Modifier:	RED DOT
Buttonhole Control:	RED DOT



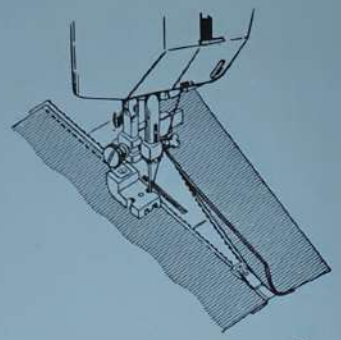


Fig. 1

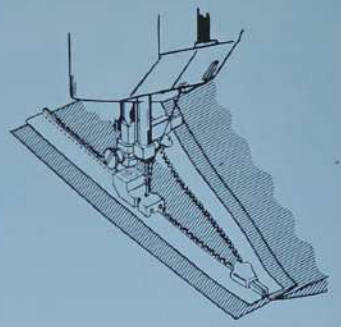


Fig. 2

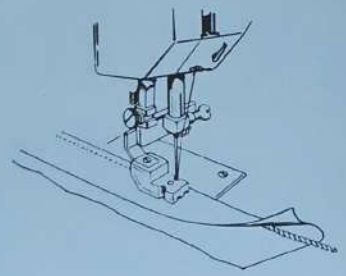
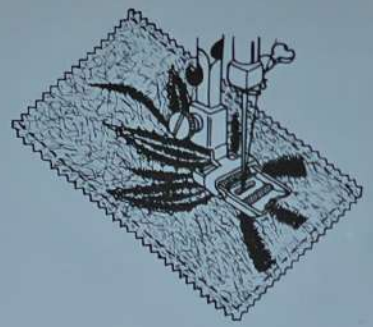


Fig. 3

Leather sewing

Use the roller foot when sewing leather, rubber or plastic materials. When sewing such materials it is better to use straight or simple zigzag stitching rather than any of the built-in automatic practical stitches. You will obtain better results using a longer stitch length.



To insure the best possible operation of your machine, it is necessary to keep the essential parts clean at all times. Using a small brush, remove the lint that accumulates in the shuttle area and around the feed dogs.

To Clean the Shuttle Area:

1. This area must be kept free of dust, lint and an occasional tangled thread. Raise the needle bar to its highest point and remove the bobbin case.

2. Push levers of shuttle race aside and lift hook ring and shuttle out.

3. Clean the shuttle race with small brush.

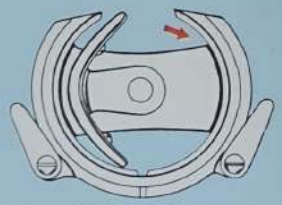
4. Put a drop of oil on the center pin of the shuttle and shuttle race. (see arrows)

5. To reassemble, hold shuttle by center pin and fit carefully into assembly opposite the shuttle driver. Slip shuttle race cover into place. Snap the levers into position.

Shuttle Assembly

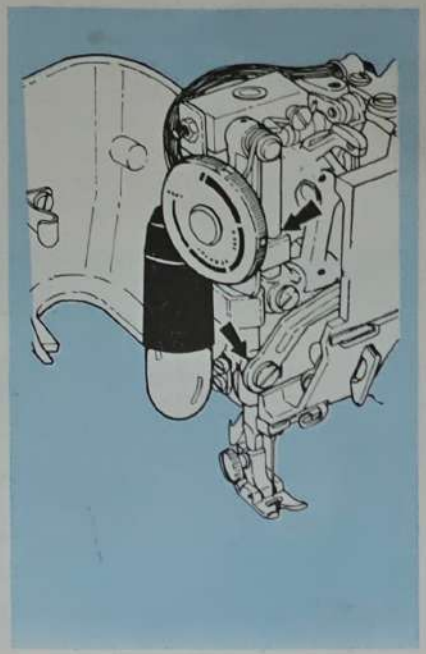
Shuttle Race Cover

Shuttle

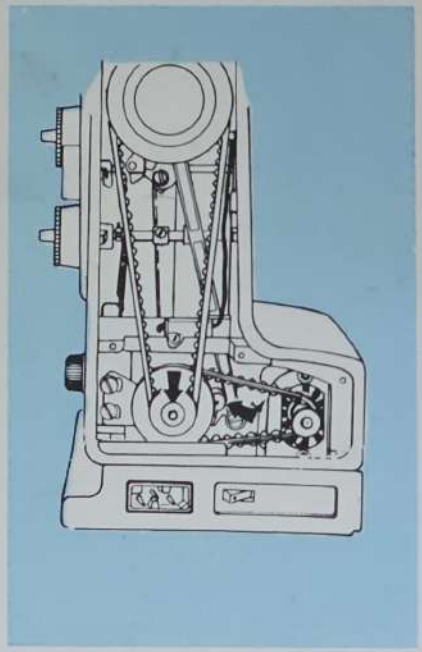


Shuttle Race

Swing hinged face cover plate open to oil points indicated at the end of machine head.

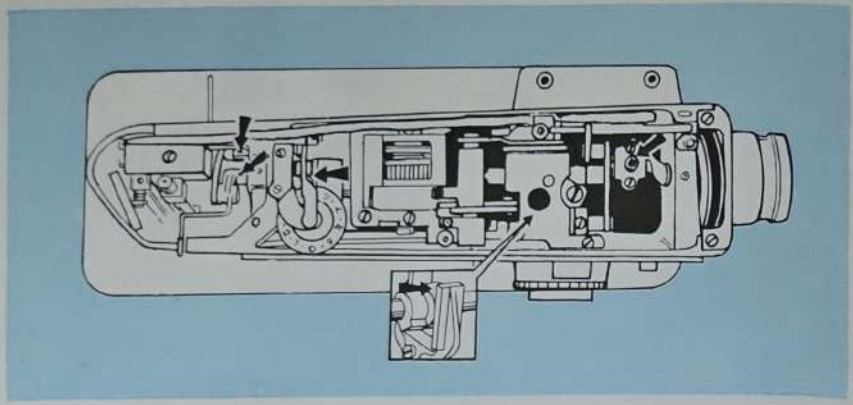


Remove the cover to oil points indicated at end of machine.



Oiling and cleaning

Remove arm cover plate to oil points indicated at top of machine head. To remove cover plate, lift cover.



Adjusting your machine for good stitches

When your sewing machine does not sew a properly locked stitch, check the following:

1. Insert a new needle of the correct size for the thread and fabric you are using. Consult chart on page 5 for needle size.

2. The upper and bobbin thread should be matched in size and type.

3. Check threading carefully. See page 8.

4. Check the thread tension balance. Use mercerized thread, and a correct size needle for the fabric you are using. Do not try this test with synthetic thread as it will not break.

Begin with a full bobbin, properly threaded into the case. Set the stitch length at about 12 stitches per inch. Fold a 6" square of your fabric in half diagonally, forming a triangle. Make a line of stitching ½" from fold.

a. If seam is puckered - both tensions are too tight.

b. If the bottom thread lays on the fabric - tighten upper thread tension, and repeat test. See page 10.

c. If the top thread lays on the fabric - loosen upper thread tension, and repeat test. See page 10.

Grasp the stitching and pull with a snap to make threads break.

a. If both threads break - tensions are balanced.

b. If neither thread breaks - both tensions are too loose.

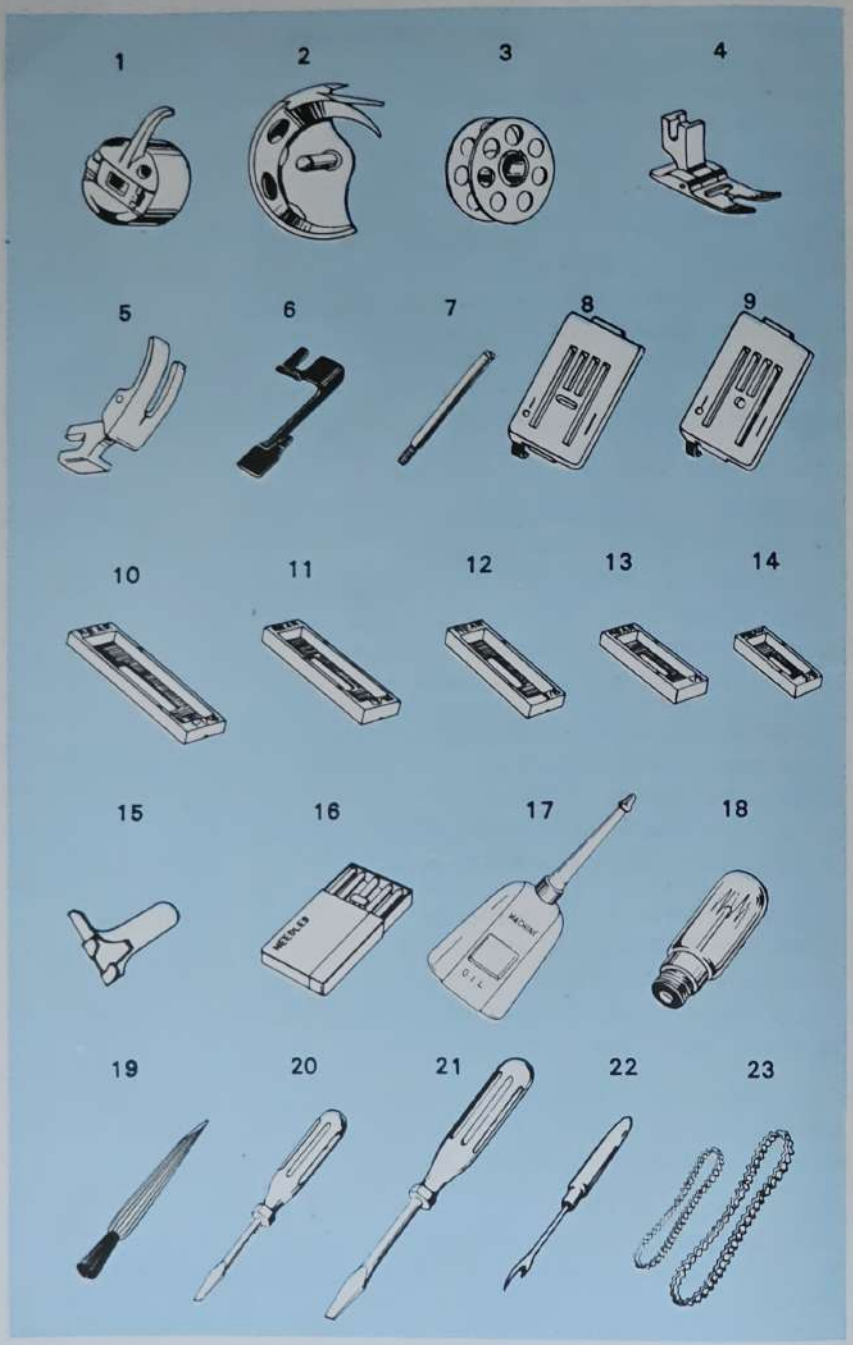
c. If upper thread breaks - loosen upper tension.

d. If lower thread breaks - tighten upper tension.

Both threads do not have to break at the same place, but they should break on the same snap.

Fault findings

PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Improper threading.	Rethread machine (page 8).
	Loose upper thread tension.	Tighten upper thread tension (page 10).
	Pulling fabric.	Do not pull fabric; guide it gently.
	Light pressure on presser foot.	Increase pressure on presser foot (page 9).
	Loose presser foot.	Reset presser foot (page 12).
	Unevenly wound bobbin.	Rewind bobbin (page 6).
Breaking Needles	Pulling fabric.	Do not pull fabric; guide it gently.
	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Incorrect setting of needle.	Reset needle (page 4).
	Loose presser foot.	Reset presser foot (page 12).
Bunching of Thread	Upper and lower threads not drawn back under presser foot.	Draw both threads back under presser foot (page 9).
	Feed dog down.	Raise feed dog (page 11).
Puckering	Incorrect thread tension(s).	Reset thread tension(s) (page 10).
	Light pressure on presser foot.	Increase pressure on presser foot (page 9).
	Using two different sizes of or kinds of thread.	Upper thread and bobbin thread should be same size and kind.
	Bent or blunt needle.	Insert new needle (page 4).
	Loose presser foot.	Reset presser foot (page 12).
	Fabric too sheer or too soft.	Use underlay of tissue paper when stitching.
Skipping Stitches	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Bent or blunt needle.	Insert new needle (page 4).
	Incorrect setting of needle.	Reset needle (page 4).
	Tight upper thread tension.	Loosen upper thread tension (page 10).
	Light pressure on presser foot.	Increase pressure on presser foot (page 9).
Breaking Upper Thread	Starting to stitch too fast.	Start to stitch at a medium speed.
	Improper threading.	Rethread machine (page 8).
	Tight upper thread tension.	Loosen upper thread tension (page 10).
	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Sharp eye in needle.	Insert new needle (page 4).
Breaking Bobbin Thread	Improper bobbin case threading.	Check bobbin case threading (page 7).
	Tight bobbin thread tension.	Loosen bobbin thread tension (page 10).
	Lint in bobbin case or shuttle.	Clean bobbin case and shuttle (page 36).
Fabric not Moving	Feed dog down.	Raise feed dog (page 11).
	Light pressure on presser foot.	Increase pressure on presser foot (page 9).
	Threads knotted under fabric.	Place both threads back under presser foot before beginning to stitch (page 9).
Machine Jamming (Knocking Noise)	Thread caught in shuttle.	Disassemble and clean shuttle (page 36).



All parts listed here may be ordered through our nearest agent.

When ordering these parts, please be sure to mention the following references:

1. Model & serial numbers of machine shown on the nomenclature plate.

2. Parts number(s) and description(s) shown below.

When ordering by mail, prices will be furnished on request.

Ref. #	Part #	Description
1	13682	Bobbin case
2	47	Shuttle hook
3	183	Bobbin
4	40390	Standard zigzag foot
5	40752	Straight stitch foot
6	34476	Blind stitch guide
7	8286	Thread spool pin
8	38295	Needle plate insert (zigzag)
9	38296	Needle plate insert (straight)
10	40234	Buttonhole guide (1 1/16)
11	40233	Buttonhole guide (13/16)
12	40232	Buttonhole guide (5/8)
13	40231	Buttonhole guide (1/2)
14	40230	Buttonhole guide (3/8)
15	17160	Needle threader
16	39775	Needle
17	1822	Oiler
18	17351	Light bulb
19	35848	Brush
20	1824	Driver (small)
21	1823	Driver (large)
22	16500	Buttonhole opener
23	33312 40034	Motor belts

Memo

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